are complicated, a bronchitis being associated with spasm, a spasm exciting bronchitis. The following facts bear on the treatment: 1. Spasms of the air-passages can be produced voluntarily by most asthmatics and by many normal persons. 2. Almost all asthmatics can suppress the spasms even during an attack, but especially during the remissions, so that along with vigorous respiratory interchange the abnormal breath sounds are absent. 3. The muscles of the air-passages are, or can be, placed under the control of the will. The following therapeutic suggestions are offered: Patients with asthma should practice respiratory gymnastics. They should learn to breathe deeply and slowly. It is usually necessary to teach proper expiration first. The inspiration during speech should be slow and deep, the speech should be slow and measured. Assistance from a trained instructor is very useful, but not absolutely necessary, during the whole treatment, which may require months.

Physical Diagnosis of Pleural and Pericardial Effusions.—SCHÜLE (*Münchener med. Wochenschrift*, 1898, No. 51) reports two very interesting cases of pleurisy with effusion, in which the friction rub of dry pleurisy was heard. Case I. had every sign of pleuritic exudate. Suddenly over the entire area of dulness a distinct pleuritic friction rub was heard. An exploratory puncture was made, and several c.cm. of exudate withdrawn. In Case II. the friction rub was diffuse, but especially audible over the lower part of the dulness. Fluid was demonstrated by several exploratory punctures. The author draws the entirely correct conclusion that circumscribed areas of lung and costal pleura were in contact, the exudate not being very great; also, that aspiration should always be practised in such cases.

The author has made experiments upon the cadaver that lead him to modify some of the commonly accepted ideas regarding the physical signs in pericarditis with effusion. Of the early signs of this disease a dulness over the manubrium is considered the most important. This phenomenon is usually explained by the pushing up of the fluid by the heavier heart. The author holds this idea to be incorrect. When water is injected into the pericardium of a cadaver it distributes itself evenly and presses on all sides, and not in the upward direction alone. When 150 c.c. of water are injected, dulness appears under the manubrium. The author's explanation is as follows: The pericardium resembles a long-necked flask, the neck surrounding the great vessels. Here the fluid collects relatively early and displaces the lung borders from the mediastino-costal sinus. At the same time the heart is surrrounded with fluid, and its area of dulness is increased to the right and left; but this is not so striking as the dulness, where formerly was resonance, under the manubrium. Œdema of the mediastinal tissues can produce a similar dulness of the manubrium, and sometimes occurs shortly before death. The artificial injection of the pericardium also furnishes some interesting facts about the shape of the dulness. It required about 250 c.cm. of fluid to produce the usual characteristic triangular-shaped dulness. It was especially distinct with 350 c.cm. When the pericardium was filled to its limit —700 to 800 c.cm.—the form no longer corresponded to that usually described. Instead of an obtuse-angled triangle, with sides extending from the jugulum to the right mammillary and left axillary lines, respectively, the pericardium was distended chiefly to the left and downward, the right edge of the dulness being in the right sternoclavicular line. The author admits that in long-standing inflammatory processes the right wall may become yielding. In acute processes, however, such as hydro-pericardium or hæmato-pericardium, we have a condition similar to that in the cadaver, and we do not then have an equilateral triangle. He thinks that the compressed lung or a pleuritic exudate complicates the percussion findings more often than is thought, thus agreeing with Biernacki (*Volkmann's Sammlung klin. Vortr.*, 1897).

The Causes of the Healing of Tuberculous Peritonitis after Laparotomy.—HILDEBRANDT (*Münchener med. Wochenschrift*, 1898, Nos. 51 and 52) carefully reviews the numerous theories which have been presented as explanations for the results of laparotomy in tuberculous peritonitis, and discards them all as incapable of satisfactorily solving the problem. In order to discover how the healthy and diseased peritoneum reacts to known irritations he made the following experiments: Laparotomies were performed on healthy dogs and rabbits in a room at ordinary temperature. A marked increasing hyperæmia was noticed, the vessels pulsated actively, the serosa, which in the beginning appeared pale blue, took on a rose-red hue, and vessels previously almost invisible became distinct. A venous hyperæmia soon ensued, and the intestines became paralytic and distended. In operations under physiological salt solution at the body temperature there was only an arterial hyperæmia—no venous hyperæmia, distention, or paralysis. A tuberculous peritonitis was produced by injecting slightly virulent tuberculous material into the abdomen of rabbits and dogs. The effect of subsequent laparotomy showed itself in several ways: It checked the spreading of the process; it caused a disappearance of the tubercles; it prolonged life. Like Gatti, the author found that operations after injection, but before the appearance of tubercles, had no effect on the process. Following operation the author observed an involution of the tuberculous process, and in isolated cases a complete healing, with disappearance of the tubercles which he had seen in the laparotomy. In considering the bearing which these facts have upon the explanation of the cause of the recovery the author reminds us that there are tuberculous diseases of the peritoneum that heal spontaneously, and he believes that laparotomy only increases the natural healing factors. The venous hyperæmia which follows the laparotomy is more marked in the tuberculous than in the normal peritoneum. He draws an analogy from the fact that in heart diseases and kyphosis, venous hyperæmia has a curative influence on tuberculous processes in the lungs, as has passive hyperæmia upon similar processes in the joints, bones, and tendons, and concludes that venous hyperæmia, which lasts for days after laparotomy, is the important factor in the healing of tuberculous peritonitis.

Agglutination and Serum Diagnosis in Diphtheria.—J. BRUNS (*Berliner klin. Wochenschrift*, 1898, No. 51) has recently made a series of experiments on forty-four cases of diphtheria, with the object of testing the agglutinating property of the serum of diphtheria patients and the value of agglutination as a diagnostic measure. His results agreed in part with those of Nicolas,